

REMARKS

Claims 36-144 remain the application.

This application relates to vapor deposition of thin films of amphiphilic molecules or amphiphilic polymers on substrate surfaces.

More specifically, this application relates to improvements that facilitate handling and storage of the film forming substance, and that make it possible to more easily regulate the vaporization rate of the film forming substance.

These advantages and improvements are realized by packaging the film forming substance of amphiphilic molecules or amphiphilic polymers as part of a combination product that includes an inert material. The inert material protects the film forming substance and facilitates handling of same. In addition, heating of the inert material provides more uniform and gradual vaporization of the film forming substance into a film forming vapor of amphiphilic molecules or amphiphilic polymers. The vapor settles on a substrate surface where the amphiphilic molecules or amphiphilic polymers self-assemble into a thin film.

The inert material does not react with the film forming substance or the vapor, and remains stable and unvaporized at the vaporizing temperature of the film forming substance.

In one advantageous arrangement, the inert material is a solid state particulate material that is compressed into a tablet or is compressed into a cup and the inert material carries the film forming substance. In such an arrangement, at least a portion of the tablet has the film forming substance interspersed therein. In another advantageous arrangement, the film forming substance itself is in a solid state.

A product in accordance with the present application may consist essentially of the inert material and the film forming substance, and the film formed by deposition of the vaporized film forming substance on a substrate surface consists essentially of amphiphilic molecules or amphiphilic polymers.

The requirement for restriction is not well taken because it should be only a three way requirement rather than a four way requirement. A three way requirement would be reasonable between: (1) a product for use in vapor deposition of amphiphilic molecules or amphiphilic polymers on a substrate surface; (2) a method of forming a film of amphiphilic molecules or amphiphilic polymers on a substrate surface; and (3) a method of forming a solid state film forming substance of amphiphilic molecules or amphiphilic polymers. Further separating the Product Group into separate groups according to the type of amphiphilic molecule or amphiphilic polymer that is recited is not proper. Regardless of the particular amphiphilic molecule or polymer, all of the products are for use in vapor deposition of a film of amphiphilic molecules or amphiphilic polymers on a substrate surface.

Insofar as the original requirement for restriction is understood, all of claims 36-144 are believed to be directed to the elected invention.

Original claims 3, 4, 6, 9 and 13 were rejected only on grounds of double patenting, and that rejection no longer applies. Therefore, these claims are in condition for allowance, and have been rewritten as claims 136-144. Claims 136 and 141 correspond to original claims 3 and 4 except for changing "alkylsilsesquioxane polymer" to "a film forming substance of amphiphilic molecules or amphiphilic polymers." Dependent claims 137 and 142 are the same as original claims 3 and 4. Claims 138, 139 and 140 recite the subject matter of original claim 13 and its

original parent claim 12. Claim 143 corresponds to original claim 6, and claim 144 corresponds to original claim 9.

Claim 145 is similar to original claim 1, but now recites a solid state composition that consists essentially of a solid state inert binder that carries a solid state alkylsilsequioxane polymer.

Original claims 1, 2, 5, 7, 8 and 10-12 were rejected under 35 U.S.C. § 102(b) on either U.S. Patent No. 5,616,532 to Heller et al or U.S. Patent No. 6,153,689 to Itoh et al.

Both Heller et al and Itoh et al relate to liquid coating compositions like paint that are applied by "painting, spraying, dipping or spin coating" (see Heller et al column 12, lines 17 and 18). The compositions are highly liquid and include inert materials such as silica simply to provide scratch resistance in the finished coating. Thus, the inert material itself is included in the finished coating, and is not used as a carrier for a vaporizable film forming polymer of amphiphilic molecules or amphiphilic polymers. On the contrary, the solvent and water in the Heller et al and Itoh et al composition form the carrier for the silica as well as the polymer.

It is plain that neither Heller et al nor Itoh et al are relevant to any of the claims that are pending in this application.

In the absence of more pertinent art, this application is now in condition for allowance and an early notice to that effect is earnestly solicited.

Respectfully submitted,

A handwritten signature in cursive script, reading "H. Duane Switzer", written over a horizontal line.

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